

REMARKS

1. Office Action Summary

Prior to entry of this amendment, claims 15-20 are pending. Claims 15 and 17 are independent claims. In the Office Action dated November 14, 2002, the Examiner rejected claim 15 under 35 U.S.C. § 102(b) as being anticipated by Nojo et al. (U.S. 6,059,920). Claims 15-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Perlov et al. (U.S. 6,086,457) in view of Togawa et al. (U.S. 6,413,154).

2. Claim Rejection – 35 U.S.C. § 102

The Examiner has rejected claim 15 under 35 U.S.C. § 102(b) as being anticipated by Nojo et al. Applicants respectfully traverse this rejection. Nojo et al. discloses a polishing apparatus that includes a first pipe that delivers a first solution and a second pipe that delivers a second solution. The first and second solutions are introduced into a third pipe and are mixed in the third pipe to generate a polishing liquid to polish a semiconductor wafer.

Claim 15

Claim 15 has been amended so that the sources of an oxidizer-free medium and an oxidizing medium are maintained separately and so that the source of an oxidizer-free medium is utilized by the polishing station prior to the source of an oxidizing medium. Support for this amendment may be found on page 6, lines 19-22 of the Specification. With respect to Nojo et al., Applicants note that Nojo et al. discloses first and second solutions that are supplied to a pipe that constitutes a mixing unit (col. 5, lines 54-60). The solutions are mixed to produce a single polishing liquid (col. 6, lines 14-17). In contrast to Nojo et al., claim 15 discloses two polishing mediums that are maintained separately and are not mixed before being utilized at a polishing station. Moreover, as amended, only one medium is used at a time to polish the surface of a wafer. This is not disclosed in Nojo et al., where instead a mixture made up of two solutions is used to polish a wafer surface.

Therefore, Applicants respectfully assert that the rejection under 35 U.S.C. § 102(b) has been overcome and reconsideration is requested.

Claim 16 is dependent from claim 15 and therefore its allowability directly follows from claim 15.

3. Claim Rejection – 35 U.S.C. § 103

The Examiner has rejected claims 15-20 under 35 U.S.C. § 103(a) as being unpatentable over Perlov et al. in view of Togawa et al. Applicants respectfully traverse this rejection. Perlov et al. discloses a polishing apparatus that includes multiple polishing stations. A slurry dispenser allows a variety of slurries to be supplied to the various polishing stations. Togawa et al. discloses a polishing system that includes multiple polishing apparatuses. A single polishing solution made up of a diluted stock solution is supplied from a mixing tank to the various polishing apparatuses in order to polish wafers.

Claim 15

As noted above, claim 15 has been amended so that the sources of an oxidizer-free medium and an oxidizing medium are maintained separately and so that the source of an oxidizer-free medium is utilized by the polishing station prior to the source of an oxidizing medium. With respect to Togawa et al., Applicants note that a single polishing solution is supplied from a mixing tank to various polishing apparatuses to polish wafers. Unlike claim 15, two separate polishing mediums are not supplied. Because only one polishing solution is contemplated for use in Togawa et al., Applicants respectfully assert that combining Togawa et al. with Perlov et al. would not disclose or teach a polishing system having a source of an oxidizer-free medium and a source of an oxidizing medium wherein the source of an oxidizer-free medium is utilized prior to the oxidizing medium as claimed in claim 15. Therefore, Applicants respectfully assert that claim 15 distinguishes over the prior art and that the rejection under 35 U.S.C. § 103 has been overcome. Reconsideration is requested.

Claim 16 is dependent from claim 15 and therefore its allowability directly follows from claim 15.

Claim 17

Claim 17 claims a source of an oxidizer-free medium in communication with a first polishing station and a source of an oxidizing medium in communication with a second polishing station. As noted above, Togawa et al. discloses a single polishing solution that is supplied from a mixing tank to various polishing apparatuses to polish wafers. Unlike claim 17, two separate polishing mediums are not supplied. Thus, and unlike claim 17, combining Togawa et al. with Perlov et al. would not disclose or teach a polishing system having two sources and would not teach which of the two sources is supplying an oxidizer-free medium and which is supplying an oxidizing medium as asserted by the Examiner. Therefore, Applicants respectfully assert that claim 17 distinguishes over the prior art and that the rejection under 35 U.S.C. § 103 has been overcome. Reconsideration is requested.

Claims 18-20 are dependent from claim 17 and therefore their allowability directly follows from claim 17.

4. New Claims 21-23

By this paper, Applicants have added new claims 21-23. Claim 21 is an independent claim and claims 22-23 depend from claim 21. Claims 21 are directed to a delivery system that supplies an oxidizer-free medium and a delivery system that supplies an oxidizing medium such that the oxidizer-free medium polishes a wafer surface prior to the oxidizing medium. Applicants respectfully assert that these claims are allowable for at least the same reasons given for independent claims 15 and 17.

SUMMARY

In conclusion, Applicants have amended claim 15 and 17 and have added new claims 21-23. Applicants respectfully submit that all pending claims are allowable in their present form, and hereby request allowance of claims 15-23. If any questions arise or issues remain, the Examiner is invited to contact the undersigned at the number listed below in order to expedite disposition of this application.

Respectfully submitted,

A handwritten signature in cursive script, reading "Anastasia Heffner", written over a horizontal line.

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